

MSHA Training Summit

January 27, 2015

Agenda

- 12:30 pm - - Jeff Duncan**
Welcome and Introduction of A/S Main
- 12:32 pm - - Joe Main**
Opening Remarks
- 12:40 pm - - Terry Bentley**
Review of Coal Fatalities
Review of Coal “Near Misses”
- 12:50 pm - - Mike Hancher**
Review of MNM Fatalities
Review of MNM “Near Misses”
- 1:00 pm - - Jeff Duncan**
Answers to questions from 11/13/2014 Summit
Update on EFSMS outreach to mining associations, labor and other stakeholders
Request for trainers to share their training materials and ideas for new training products
- 1:10 pm - - Glen Poe**
Discussion of Job Task Analysis (JTAs) for use in task training
Examples of completed JTAs posted on the “Trainers Page”
- 1:15 pm - - Jeff Duncan**
New material on MSHA’s Trainers Page
Open it up to the audience for questions
- 1:28 pm - - Joe Main**
Closing Remarks

Coal Mines 4th Quarter

Terry Bentley

202-693-9521

bentley.terry@dol.gov

Coal Fatalities 4th Quarter 2014

4 Fatalities

- Kentucky Powered Haulage (Underground)
- West Virginia Fall of Roof / Back (Underground)
- Wyoming Powered Haulage (Surface)
- Kentucky Fall of Face/Rib/Pillar, or
Highwall (Surface)

Coal Fatal Accidents By Occupation 4th Quarter 2014

- Repairman – 1
- Foreman– 1
- Truck Driver – 1
- Utility/Miner – 1

Coal 2014 Fatal Accidents

- 11 Underground Mines – 5 Surface Mines
- Classifications:
 - Powered Haulage – 5
 - Machinery – 5
 - Fall of Face/Rib/Pillar/ or Highwall – 3
 - Electrical – 1
 - Fall of Roof or Back - 1
 - Other (Drowning) – 1

Coal Fatalities 2014– 9 States

Coal 2014 Fatalities by State:

● West Virginia	5
● Virginia	2
● Kentucky	2
● Wyoming	2
● Indiana	1
● Illinois	1
● Alabama	1
● Utah	1
● Montana	1
● Total	16

COAL MINE FATALITY – On Tuesday, October 7, 2014, a 31-year-old utility worker, with 13 years of mining experience, was killed after he crawled 37 feet into an entry mined with a highwall mining machine to retrieve a broken cutter-head-chain from the mining machine. A rock, 8 feet wide, 6 feet long, and 16 inches thick fell on him. He was initially transported to a local hospital and was being airlifted to a larger medical facility when he died.



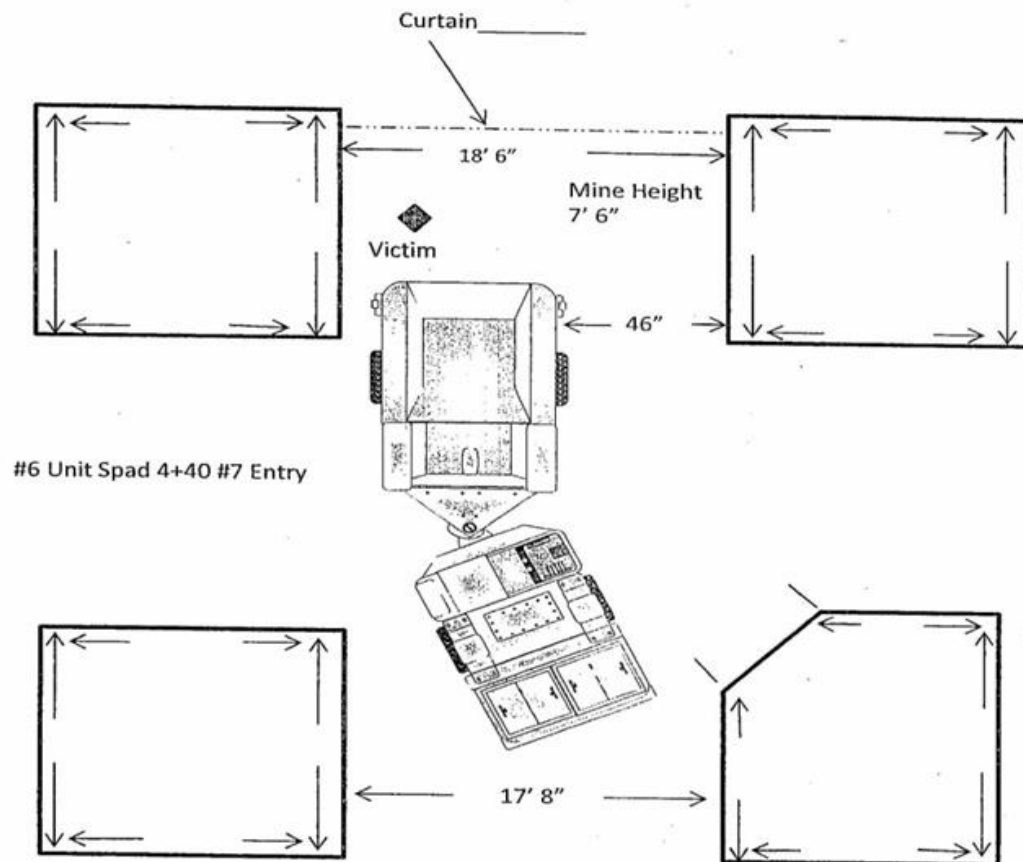
COAL MINE FATALITY – On Saturday, October 18, 2014, at approximately 10:05 p.m., a contractor truck driver with over 5 years of truck driving experience was killed while operating a rock truck. The driver was removing top soil ahead of the East Elk Pit when he drove off a highwall and fell approximately 240 feet.



COAL MINE FATALITY – On Monday, November 10, 2014, at approximately 9:35 p.m., a 49-year-old section foreman with 27 years of mining experience was killed when he was struck by a large rock that measured 5 feet by 3 feet by 13 inches thick. The victim was operating the roof bolting machine on the 2 North section in the No. 2 entry at the time of the accident. The rock fell inby the last full row of permanent roof supports and between the automated temporary roof support (ATRS) and the left rib.



COAL MINE FATALITY – On Tuesday, December 16, 2014, a 34-year-old repairman, with approximately 15 years of mining experience, was killed when struck by a ram car while he was walking inby toward the face of the No. 7 entry. The ram car operator moved the ram car into the No. 7 entry with the batteries positioned outby the face area and then traveled towards the face area, striking the victim with the left side, trailer end of the ram car.



NEAR MISSES and NON-FATAL ACCIDENTS

Coal Mine Accident: A non-fatal accident occurred when a bulldozer broke into a cavity in a raw coal stockpile above the feeder. The bulldozer cab was completely covered and the dozer operator was entrapped for approximately four hours before being rescued.



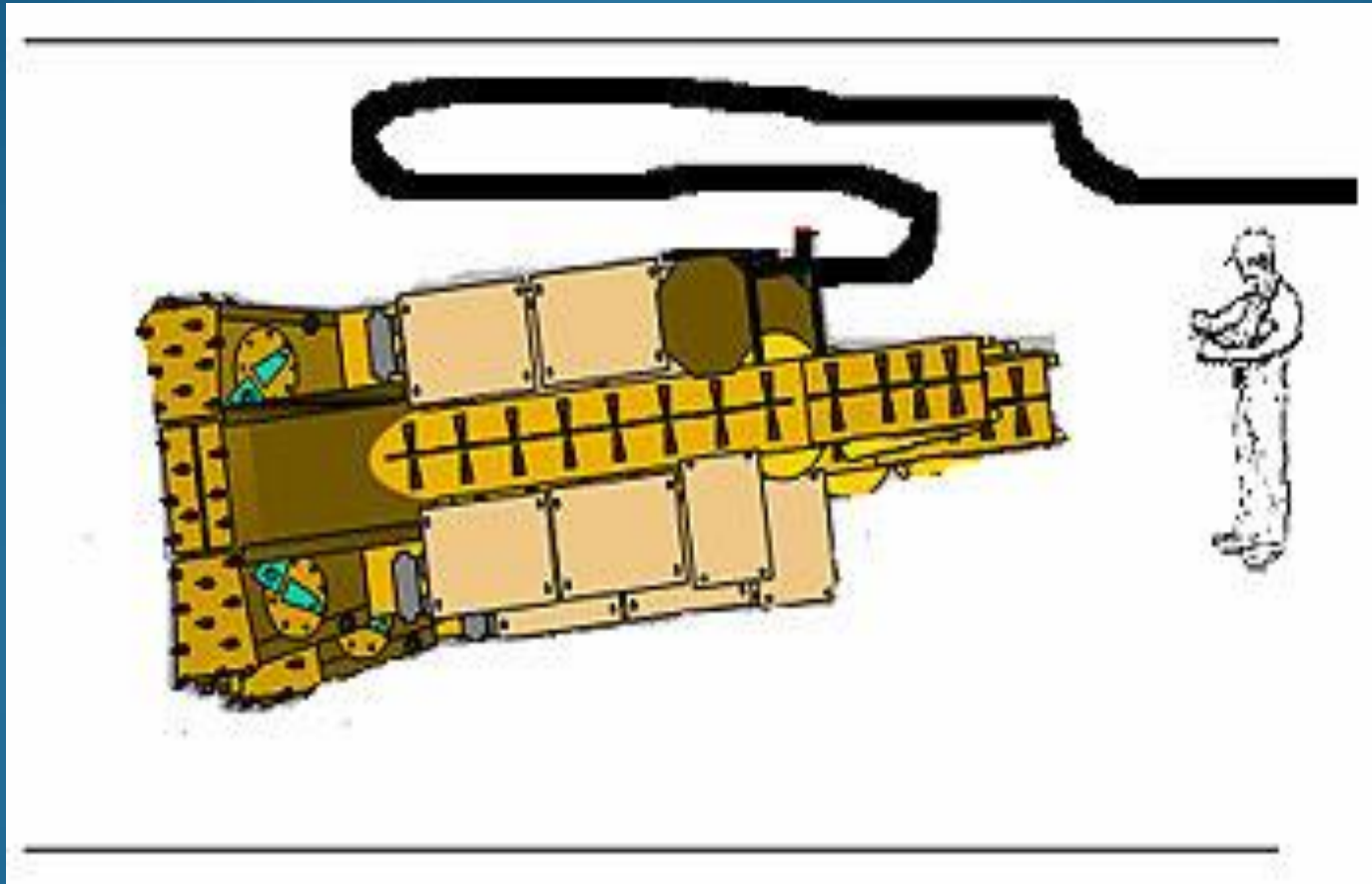
Coal Mine Accident: An electrician and his assistant were shocked while testing lid switches to troubleshoot the ground monitor pilot circuit. The electrician fell into an energized high voltage enclosure and his head contacted a 4,160 VAC transformer terminal. The victim assumed the circuit was deenergized and did not open, lock-out, or tag-out the visual disconnecting device. His assistant was shocked when he removed the electrician from the high voltage circuit.



Coal Mine Near Miss: MSHA issued an imminent danger order because a foreman and a miner climbed a portable ladder that was not properly secured to work on a fuel tank. The bottom of the ladder was positioned on a tool box mounted in the back of their service truck. When they were found, the foreman was standing on about the third rung from the top after pushing the miner up on top of the tank.



Coal Mine Accident: A continuous mining machine operator was in the red zone and was struck by the boom of the machine, knocking him against the coal rib. The miner was transported for medical evaluation and released that same day. The machine was equipped with a proximity system that was inoperable.



Coal Mine Near Miss: A non-injury accident involving a highwall fall on a highwall miner occurred on 8/6/14. The surface mine foreman noted that the highwall was showing signs of falling and withdrew all the miners from the area before the highwall fell. The fall was 20' wide, 15 to 18' thick, and 25' long.



Best Practices

- Install and Maintain Proximity Detection Devices
- Provide Training, including Hazard Recognition Training
- Conduct Workplace Examinations
- De-energize Power and Lock Out/Tag Out
- Conduct Pre-operational checks
- Secure and stabilize ladders before use
- Use Personal Protective Equipment

Metal and Nonmetal

4th Quarter

Michael Hancher

202-693-9641

hancher.michael@dol.gov

MNMF Fatal Accidents – 2014

- Underground Mines – 6
- Surface Mines – 19
- Contractors – 7
- Classifications
 - Powered Haulage – 8
 - Falling/Sliding Material – 5
 - Fall of Person – 4
 - Machinery – 3
 - Fall of Rib – 2
 - Hoisting – 1
 - Electrical – 1
 - Explosion of Gas – 1

MNM Fatal Accidents by State -- 2014

- Florida – 1
- Idaho – 1
- Iowa – 1
- Kansas – 1
- Kentucky – 1
- Louisiana – 1
- Missouri - 2
- Montana – 1
- Nevada – 2
- New York – 2
- Ohio – 1
- Pennsylvania – 2
- South Carolina – 2
- Texas – 4
- Utah – 1
- Virginia – 2

Fatal Accidents By Commodity -- 2014

- Sand & Gravel - 7
- Cement - 3
- Limestone - 3
- Lime - 2
- Sandstone - 1
- Alumina - 1
- Iron Ore - 1
- Common Clay - 1
- Fire Clay - 1
- Gold - 1
- Gypsum - 1
- Silver - 1
- Salt - 1
- Granite - 1

Fatal Accidents By Occupation -- 2014

- Supervisor – 7
- Truck Driver – 6
- Miner/Laborer – 6
- Mechanic – 3
- Scaler – 2
- Dozer Operator – 1

MNM Fatal Accidents 4th Quarter 2014

6 Fatalities

- Pennsylvania Fall of Person (Surface)
- Texas Falling Material (Surface)
- Pennsylvania Powered Haulage (Surface)
- Ohio Powered Haulage (Surface)
- Texas Powered Haulage (Surface)
- Virginia Falling Material (Surface)

On October 10, 2014, a 66-year-old contract truck driver with approximately 11 years of experience was killed at a cement operation. The driver was inside a loading rack closing the hatch on top of a bulk tanker truck. When the victim raised the rack to access the hatch, he fell between the rack and rounded side of the truck and then fell to the ground.



On November 18, 2014, a 42-year-old contract supervisor with 19½ years of experience was killed at an alumina operation. A crane was lifting a 2,500 pound door to be installed on a filtrate tank. The welded lifting eye on the door broke loose and the door fell, pinning the victim on the concrete floor.



On November 25, 2014, a 67-year-old truck driver with 10½ years of experience was killed at a sandstone mine. The victim backed a haul truck to the edge of the overburden dumpsite and started to raise the truck's bed to dump a load of material. The bank failed, causing the truck to overturn and fall 30 feet below. The victim died en route to the hospital.



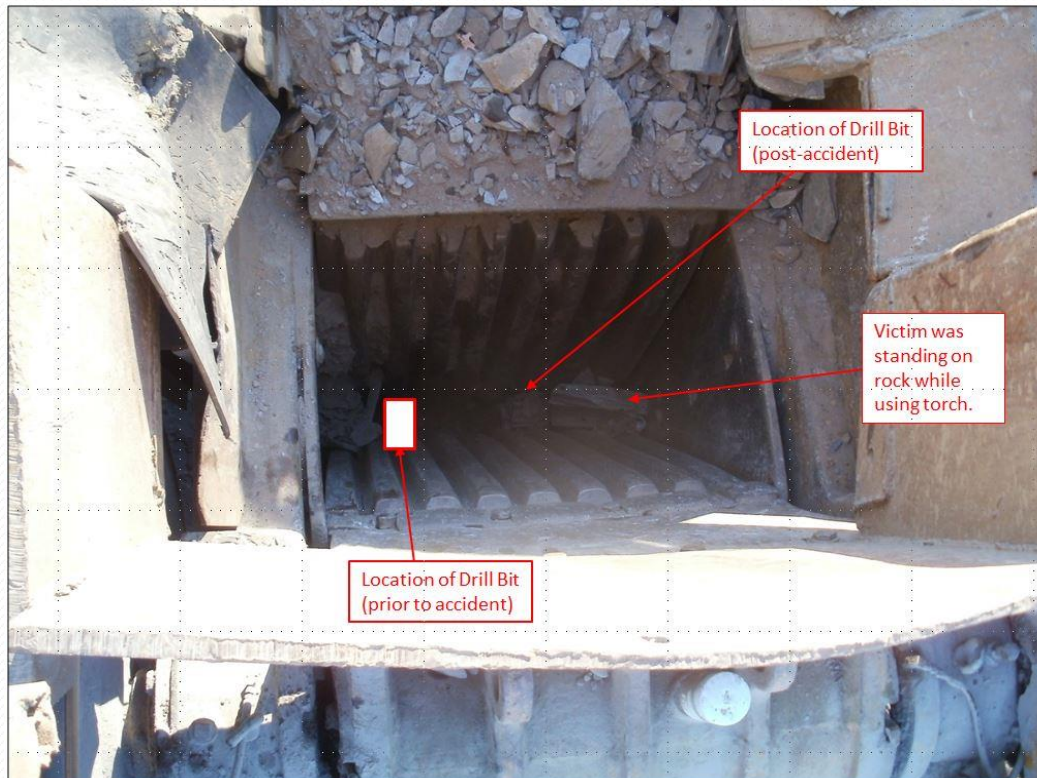
On December 1, 2014, a 46-year-old contract truck driver with 26 years of experience was killed at a limestone mine. The articulating haul truck he was operating traveled over a roadway berm and went into a large pond. Dive teams extricated the victim from the truck.



On December 29, 2014, a 21-year-old warehouse bagger with 1 week of experience was killed at a clay mine. The victim was operating a forklift, hauling a bag of dust, when the forklift overturned.



On November 10, 2014, a 45-year old crusher operator with 3 years of experience was seriously injured at a granite mine. The miner was using a torch to cut a drill bit that was wedged in a jaw crusher when the bit freed and struck him. The victim was hospitalized and died on January 17, 2015, as a result of his injuries.



NEAR MISSES

Crushed Limestone mine – An over-the-road truck contacted an overhead power line when the bed was raised, causing the cab and wheels to catch fire. No signs warning of the presence of the overhead power lines. Contract truck drivers not provided site-specific hazard awareness training.



Sand & Gravel mine - The primary feed hopper plugged. Four miners were directed to enter the hopper and clear the blockage. The miners were walking tread-mill style on the moving feed conveyor while attempting to dislodge the plugged material. One miner slipped and was completely engulfed by sliding material. Another miner was covered up to his waist. The feed conveyor was shut off and the other two coworkers were able to dig out both of the covered miners. All four miners escaped with minor cuts and bruises.



Gypsum mine- A front-end loader was traveling with the bucket in the elevated position transporting a full bucket of material to feed into the crushing plant. At the same time, a water truck was traveling in front of the feed ramp. The rising sun temporarily blinded the loader operator and he did not see the water truck in his path. Even with the extensive damage to the driver's compartment area, miraculously there was no injury.



Crushed stone mine - - This large rock rolled down a bank and onto the roadway only seconds after a small excavator traveled past this area. The operator was tramming the machine with the cab facing the highwall. The rock covered the entire roadway.



Sand & Gravel mine - The crushing superintendent was leaning across a 42-inch discharge belt conveyor attempting to remove a portion of the rubber belt skirting when the conveyor activated drawing him in. He was conveyed under the portable crusher and 18 feet up the belt toward the discharge point. He managed to grab on to the magnet frame and hold on until the conveyor was stopped.



Best Practices

- Provide Training, including Task Training
- Conduct Workplace Examinations
- Deenergize Power and Lock Out/Tag Out
- Conduct Pre-operational checks
- Maintain Mobile Equipment
- Provide/Wear Personal Protective Equipment

Education, Policy, & Development (EPD)

Jeff Duncan

202-693-9572

duncan.jeffrey@dol.gov

Q & A from 11-13-2014 Summit

Q – One summit participant recommended that we provide contact information for the persons making presentations.

A – We thought that was an excellent recommendation and we revised the 11-13 presentations (posted on our Trainers Page) to include the contact information, and we will include it in all of these presentations going forward.

Q – Does MSHA offer classes geared to safety professionals in the industry, similar to what is offered by OSHA for general industry?

A – Yes, MSHA offers several courses available through the National Mine Academy, and the Educational Field and Small Mine Services group (EFSMS). EFSMS specialists provide onsite assistance and training, while the Academy offers courses at our facility located in Beaver, WV.

Q & A from 11-13-2014 Summit

Q – Does MSHA's EFSMS group provide results of their training evaluations?

A – EFSMS specialists provide the results to the instructor and in the case of a MSHA enforcement issue, to the inspector.

Q & A from 11-13-2014 Summit

Q – Does MSHA have any new training material translated into Spanish?

A – MSHA is committed to a continuing process of providing quality training materials to our Nation's miners, including Spanish-speaking miners. We have an Instructional Materials Development (IMD) specialist devoted entirely to Spanish material translation and development in an effort to reach as many Spanish speaking miners as possible. We encourage other organizations to do the same. In response, we also provided a list of 10 recently developed or translated training materials. These materials are available through the Mine Academy.

Q & A from 11-13-2014 Summit

Q – Received an inquiry about training material for “decorative rock” mining in the Northwest.

A – I passed this question on to our Instructional Materials Development group and we are looking at developing material for this sector of the industry.

EFSMS Industry Outreach

- EFSMS has been contacting mining associations, labor and other mine safety related stakeholders across the Nation in an effort to share what we do and develop partnerships to collectively address training issues and leverage training resources.
- To date, more than 125 contacts have been made.
- Met with a number of stakeholders and have identified training gaps and opportunities.
- Participated or are scheduled to participate in stakeholder conferences, workshops, and classes.
- Engage in candid dialogue in terms of what EFSMS can do better, and how specifically EFSMS training can be leveraged with stakeholder training resources/programs.
- Partner with stakeholders to identify voids in existing training materials and work together to develop new material.

EFSMS Contact Information

Glen Poe

Acting Manager

Office (202-693-9585)

poe.glen@dol.gov

Eric Johnson

Assistant Manager

Office (303-231-5438)

johnson.eric.c@dol.gov

Rick Swartz

Acting Assistant Manager

Office (724-548-5611)

swartz.rick@dol.gov

MSHA – Trainer Partnership

- We also want to work with you, the trainers participating in this Summit.
- We are requesting that you share your:
 - Best training materials and programs, (non-copyright restricted/videos must be closed captioned), to be posted on our Trainers Page
 - Ideas for new training materials - printed, video, web-based, etc.
- Please send your materials, programs and ideas to:
 - mshatraining@dol.gov

Highlighting The Value Of Job Task Analysis (JTA)

Glen Poe

202-693-9585

poe.glen@dol.gov

Overview of JTA's

- JTA Defined
- MSHA History for JTA's
- Location of JTA's
- Customizing JTA's
- The Value of JTA's
- JTA Examples

Haulage Truck - Traveling Unloaded

Job Steps	Importance Narrative (Risk/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work (Student Evaluation)	Procedure/Risk Resolution Notes/Comments
Release parking brake				
Sound horn/check for clearance				
Engage transmission & signal before moving				
Perform initial movement checks <ul style="list-style-type: none"> Rolling brake Steering <ul style="list-style-type: none"> Front end play Proper right/left steering 				
Recognize abnormal performance <ul style="list-style-type: none"> Driveline noise and vibration Unusual odors/noises Gauges/indicators 				
Maintain safe speed for conditions <ul style="list-style-type: none"> Weather Road Visibility Traffic 				
Know your blindspots				
Check for road hazards				
Check for highwall hazards				
Practice defensive driving <ul style="list-style-type: none"> Awareness for other vehicles Vehicle spacing Scan ahead Seatbelt 				
Traveling on a Grade <ul style="list-style-type: none"> Pre-select gear for grade Use retarder Yield to loaded truck 				

Duty 5: Dredge Shutdown

Learner will demonstrate how to conduct a safe and thorough dredge shutdown. Learner will also explain the job duties, why they are conducted, any associated risk, and how to implement appropriate controls. Conducting a safe and efficient dredge shutdown include the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Swing dredge to port side of cut		1		
Raise ladder to fresh water		1		
Pump water to clear materials from pipeline (approximately 15 minutes)		1		
Observe instruments for return to baseline readings		1		Flow, vacuum and discharge pressure
Notify plant operator dredge is shutting down	This lets plant personnel know material is not coming anymore and they can go ahead and begin their shutdown	2		
Throttle down underwater pump to zero		1		
Disable underwater pump		1		
Shut cutter direction off		1		
Shut jet pump down		1		
Raise ladder to safety chain		1		
Tighten up swing cables		1		
Shut down system hydraulics		1		
Shut cutter hydraulic pump down		1		
Shut oil cooling pump off		1		
Turn off controls		1		
Log off of plant computer		1		
Install window guards		1		
Make necessary entries in diary/log		1		
Allow service water pump to continue operating		1		Pump is left running to allow flushing of vacuum, depth and discharge sensors
Exit operator's compartment		1		Wear life jacket and hard hat

Duty 4: Scoop Control Functions

Learner will demonstrate how to safely operate the S&S Scoop controls in a non-production setting. Learner will also explain the controls, what they operate and how they function. Safe operation of the S&S Scoop controls includes the following:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Stay in deck at all times while testing deck controls	Prevents crushing injuries due to unexpected movement	3		Give trainee adequate time to learn and practice these controls Use picture or diagram of deck controls to train
Demonstrate the pump motor directional switch		1		Flip down one click to "run", two down for "forward" and three down for "reverse" Must stop at "run" position first for pump motor to stop (time delay on pump) Tram pedal must be fully released for pump to start
Demonstrate light switch function		1		On/off switch Lights change direction in conjunction with tram lever
Demonstrate foot brake function	Prevent personal injury from unexpected movement	2		Depress to stop
Demonstrate park brake function	Failure to release could result in damage to equipment. The scoop is capable of pulling through the park brake, it could fill the section with smoke.	2		Push park brake lever forward (smallest lever) Pump hand/manual release lever to release brakes in emergency situation (larger lever)
Demonstrate panic bar	Most important safety device on machine; stops all functions and sets park brake	3		Push to shut the machine down Kicks breaker to battery Activates park brake if powered on
Demonstrate audible alarm function		1		Manual bell
Demonstrate the tram pedal function		1		Depress to tram May have to raise pedal with your foot if it sticks/spring breaks

New Material for Trainer's Page

- 2014 TRAM Material
- Job Task Analysis (JTA's)
- Other Materials

Trainer's Page

<http://www.msha.gov/training>



UNITED STATES
DEPARTMENT OF LABOR

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Training is an essential part of MSHA's mission to keep miners safe and healthy. Our goal is to help the mining industry develop high-quality training programs, and to strengthen and modernize training through collaboration with industry stakeholders. Federal law requires that all miners receive basic and annual refresher training, and that all mine operators maintain an effective training plan. MSHA provides materials, guidance, and hands-on assistance to help miners and operators meet their training obligations and more. We have gathered many of our materials on this page for your convenience, and will add to them over time.

Questions? Comments? Materials to share? Please contact us at mshatraining@dol.gov for assistance or to suggest improvements to the training page.

Part 48 or Part 46? Learn what it means here.

Spotlight

27
JAN

Materials for quarterly conference call

Slideshow with presentations on new training materials, and fatal accidents and near-misses from Coal and Metal/Nonmetal

14
NOV

Recording of 3rd quarter conference call

Listen to a one-hour MSHA call with trainers, held Nov. 13, regarding recent fatalities and training resources

13
NOV

Materials for 3rd quarter conference call

Slideshows on **Coal fatalities**, **MNM fatalities**, and **EPD presentation on task training and adult learning**.

Training Programs and Courses

Academy Courses: Coal | Metal/Nonmetal

A catalog of 2014 & 2015 courses offered by the National Mine Health and Safety Academy

State Grant Programs

Training and resources to support mine safety and health

Develop a Training Plan

The following resources may be useful in developing training plans for Part 46 and Part 48 mines. If this is your first time creating a training plan, we highly recommend getting in touch with **Educational Field and Small Mine Services** for assistance. You can also review the most current regulations set forth in 30 CFR **Part 46** and **Part 48**. The official regulations outline the required components of an approved training plan, the types of training programs that must be included in a plan, and appropriate record-keeping procedures.

Review the most current regulations: **Part 46** | **Part 48**

MSHA Training Plan Advisor

Provides guidance in developing federally required training plans for Part 46 and Part 48 mines, and allows plans to be submitted online.

MSHA Program Policy Manual

Provides assistance in interpreting and clarifying the various training requirements outlined in 30 CFR Part 46 and Part 48.

Part 46 Training Plan Starter Kit also En Español

Trainer's Page

<http://www.msha.gov/training>

Training Materials

2014 TRAM Conference Presentations

Download PowerPoint presentations from the 2014 Training Resources Applied to Mining (TRAM) Conference

Training Videos

A large collection of videos covering health, safety and other mining-related topics

Best Practices Pocket Cards

Concise pocket cards outlining a range of health and safety best practices

Fatalgrams

Mining fatality summaries with associated best practices to help prevent similar incidents

Task Training

Concise guidelines for effective task training

Job Task Analysis Materials

Sample JTAs developed for dozens of tasks, for your customization

Health and Safety Alerts

Information on current and previous health, safety and equipment hazard alerts

MSHA Handbook Series

A variety of handbooks describing inspection procedures, education & training procedures and technical support procedures

NIOSH Training Page

Education and training resources from the National Institute for Occupational Safety and Health

Further Assistance

Educational Field and Small Mine Services

For on-site compliance assistance

National Mine Health and Safety Academy

Training and Resources Library

District Offices

Contact information and other district-specific resources for coal and metal/nonmetal mines



QUESTIONS???